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| APPLICATION NO.                 | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------|-------------|----------------------|---------------------|------------------|
| 10/678,853                      | 10/03/2003  | Isamu Uchida         | WAKAB76.002AUS      | 2450             |
| 20995                           | 7590        | 11/17/2008           | EXAMINER            |                  |
| KNOBBE MARTENS OLSON & BEAR LLP |             |                      | MARTIN, ANGELA J    |                  |
| 2040 MAIN STREET                |             |                      |                     |                  |
| FOURTEENTH FLOOR                |             |                      | ART UNIT            | PAPER NUMBER     |
| IRVINE, CA 92614                |             |                      | 1795                |                  |
|                                 |             |                      |                     |                  |
|                                 |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|                                 |             |                      | 11/17/2008          | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
eOAPilot@kmob.com

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/678,853             | UCHIDA ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | ANGELA J. MARTIN       | 1795                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 July 2008.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-7 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## DETAILED ACTION

This Office Action is responsive to the Amendment filed on July 24, 2008. The Applicant has amended claim 1. However, the rejection is made final for the following reasons of record.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al., JP 2003-217642, in view of Shiepe et al., U.S. Pat. No. 7,166,382 B2.

Rejection of claims 1-7 drawn to a process for generating power.

Uchida et al., teach comprising a process for generating power comprising: a first step of generating power from a fuel cell comprising a fuel electrode, an air electrode and an electrolyte membrane sandwiched therebetween (0004) wherein the fuel electrode is made of an alloy comprising platinum (0004) and a fuel is a liquid comprising a secondary alcohol (0004), by directly feeding the fuel to the fuel electrode (0004); a second step of contacting the air electrode in the fuel cell with an oxidizable material (0004); and a third step of generating power from the fuel cell after the second step (0030). The process as claimed in Claim 1, wherein the fuel electrode is made of

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an alloy of platinum and at least one metal selected from the group consisting of ruthenium (0015). The process as claimed in Claim 1, wherein an atomic composition ratio of platinum to the other elements in the alloy is 65:35 to 10/90 (0015). The process as claimed in Claim 1, wherein the oxidizable material is water or hydrogen (0030).

Uchida et al., do not teach the second step.

Shiepe et al., teach a process for generating power comprising: a first step of generating power from a fuel cell comprising a fuel electrode, an air electrode and an electrolyte membrane sandwiched therebetween (col. 3, lines 3-40; Fig. 2) wherein the fuel electrode is made of an alloy comprising platinum (col. 6, lines 9-17); a second step of contacting the air electrode in the fuel cell with an oxidizable material and applying a current from an external electric source between the fuel electrode as negative and the air electrode as positive, after the first step (acting as electrolyzer)(col. 4, lines 31-40; col. 10, lines 11-25; col. 13, lines 5-17); and a third step of generating power from the fuel cell after the second step (col. 3, lines 3-40; col. 4, lines 20-52). The process as claimed in claim 1, wherein the fuel electrode is made of an alloy of platinum and at least one metal selected from the group consisting of ruthenium, tin, tungsten, copper, gold manganese and, vanadium (col. 6, lines 9-17). The process as claimed in claim 1, wherein the fuel electrode is made of an alloy of platinum and at least one metal selected from the group consisting of ruthenium, tin and tungsten (col. 6, lines 9-17). The process as claimed in claim 1, wherein the fuel electrode is made of an alloy comprising platinum and ruthenium (col. 6, lines 9-17). The process as claimed in claim 1, wherein the oxidizable material is water or hydrogen (col. 4, lines 20-24; col. 6, lines

9-11). The process as claimed in claim 1, further comprising, a step of repeating the second step and the third step (col. 3, lines 3-40; col. 4, lines 20-52).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the teachings of Shiepe et al., into the teachings of Uchida et al., because the addition of the second step into Uchida et al., provides "the electrochemical cell can operate at a lower electrical resistance thereby leading to higher current output densities in the case of fuel cells or fuel cell operation, and increased energy efficiency in the case of electrolysis cells or electrolysis cell operation." (Shiepe et al)

### ***Response to Arguments***

3. Applicant's arguments filed 7/24/08 have been fully considered but they are not persuasive. Applicant argues that "neither of the references teach the second step...." However, the second step discloses applying a current in the direction opposite to a direction of current in the first step, which is the method of an electrolyzer, as described in Shiepe et al. (col. 4, lines 31-40; col. 10, lines 11-25; col. 13, lines 5-17).

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oswin, U.S. Pat. 3,416,966, teach provide a rechargeable fuel cell unit in which the regeneration fuel can be carried out in the unit by applying current in the direction reverse to that in which it is generated when using the device as a fuel cell.
5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 10:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM  
Examiner, Art Unit 1795

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795

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